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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,232	10/25/2000	Toru Nagai	1776/00055	2896

7590 12/31/2002
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P O Box 19088
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EXAMINER

SPERTY, ARDEN B

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 12/31/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/695,232	NAGAI ET AL.
	Examiner	Art Unit
	Arden B. Sperty	1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 October 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-8,10-14,16,17,20 and 22-42 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1-8,10-12,16-17,20,22-34,39-40 is/are allowed.

6) Claim(s) 13,14,19,35-38,41 and 42 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

6) Other: _____

FINAL ACTION

Summary

1. The objection to the abstract of the disclosure is overcome by the amendment.
2. Claims 9, 15, 18 and 21 are cancelled per Applicant's request.
3. The 35 USC 112 first paragraph rejection of claims 10-12 is overcome by the amendments to the claims.
4. The 35 USC 112 second paragraph rejections to claims 10-14 are overcome by amendments to the claims. The 35 USC second paragraph rejections to claims 13-14, 19 and 41-42 (regarding the heat treatment temperature) and to claim 19 (regarding the maximum temperature) still stand as detailed below.
5. The 35 USC 102(a) rejections applied to claims 1-8, 13-14 and 40 are overcome by Applicant's arguments as detailed below. The 35 USC 102(a) rejections applied to claims 16-17 are overcome by the amendment to claim 16.
6. The 35 USC 102(b) rejections applied to claims 35-38 are overcome by the amendment to claim 35.
7. The 35 USC 103(a) rejections of claims 20, 22-25, 28 and 39 are overcome by Applicant's arguments as detailed below.

35-38 - cancelled *35-OK re: amendment* **Claim Rejections - 35 USC § 112**

8. Claims 35-38 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for oxygen exchange layers and oxides having ion diffusivity with the disclosed compositions, does not reasonably provide enablement for oxygen exchange layers and

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oxides having ion diffusivity with any conceivable composition. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

9. Claims 41-42 are also rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disclosed compositions, does not reasonably provide enablement for all compositions which would meet the limitations of the claims.

10. Claims 13-14, ^{*removed limitation*} 19 and ^{*OK*} 41-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is still unclear what is meant by a "heat treatment temperature." Pages 42-44, which were indicated by Applicant to be explanatory, are insufficient because no mention is made of a "heat treatment temperature." A primary sintering temperature and a temporary sintering temperature are mentioned, but it remains unclear whether the heat treatment temperature refers to one or both of the primary and temporary temperatures.

Therefore, the rejection is not withdrawn.

11. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant's arguments regarding the claim are not persuasive because providing a range of values for what is understood to be a single data point (maximum heat treatment temperature) is indefinite. If the maximum heat treatment temperature is 1400 C then the claim should be drafted as such (i.e. ... is subjected to a heat treatment, the maximum temperature for which is 1400 C,...). If Applicant intends for the temperature to be above 1200 C but below

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1400 C then the claim should be drafted as such (i.e. is subjected to a heat treatment, the temperature of which is in the range of 1200 C to 1400 C,). As currently drafted it is unclear whether only a maximum temperature is being claimed or a specific temperature range is being claimed. One of ordinary skill in the art would not be able to determine Applicant's intended temperature requirement. Therefore, the rejection is not withdrawn.

talk to Deborah

12. Claims 19, 41 and 42 are each drawn to a method of making a composite material however no method steps are recited which result in said material, rendering the claims indefinite.

Claims 41-42 are further indefinite because there is not enough information provided in the claims to ascertain the metes and bounds of protection sought. The claims recite a method wherein the porous body portion and the dense continuous layer have properties and physical characteristics without any accompanying compositional limitations. Claims merely setting forth physical characteristics desired in the components, and not setting forth specific compositions which would meet such characteristics, are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in the future and which would impart desired characteristics.

~~claim 41.~~ It is further unclear what is intended by, "portion is includes..." in the penultimate line of

Response to Arguments

13. Applicant's arguments have been considered but are moot in view of the new grounds of rejection.

Allowable Subject Matter

14. Claims 1-8, 10-12, 16-17, 20, 22-34 and 39-40 are allowable over the prior art. The following is a statement of reasons for the indication of allowable subject matter: As previously stated, Applicant's claimed composition is not taught by the prior art because the reference does not teach the amount of the secondary metal (Ta) to add to the oxide.

15. Claims 13-14 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arden B. Sperty whose telephone number is 703-305-3143. The examiner can normally be reached on M-R, 08:00-16:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 703-308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

AB Sperty
abs
December 30, 2002

Deborah Jones
DEBORAH JONES
SUPERVISORY PATENT EXAMINER